

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of	:	Customer Number: 20277
	:	
Toru SHIMIZU, et al.	:	Confirmation Number: 9492
	:	
Application No.: 10/580,070	:	Tech Center Art Unit: 1789
	:	
Filed: May 19, 2006	:	Examiner: MOORE, Walter A.
	:	
For: FOOD PRODUCTS CONTAINING A FRUIT COMPONENT	:	

TRANSMITTAL OF APPEAL BRIEF

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Submitted herewith is Appellant's Appeal Brief in support of the Notice of Appeal filed January 27, 2012. Please charge the Appeal Brief fee of \$620.00 to Deposit Account 500417.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17 and 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Date: January 27, 2012

**Please recognize our Customer No. 20277
as our correspondence address.**

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APPEAL BRIEF

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
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Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed January 27, 2012, wherein Appellant appeals from the Primary Examiner's rejection of claims 1, 3, 5, 8, 11-14, 16-20, and 23-28.

Real Party In Interest

This application is assigned to Takasago International Corporation by assignment recorded on May 19, 2006, at Reel 018029, Frame 0013.

Related Appeals and Interferences

Appellants are not aware of any related appeals and interferences.

Summary of Claimed Subject Matter

An embodiment of the invention, per independent claim 1, is a fruit juice-containing food product comprising, in addition to a fruit component and a base having sweetness, components (a) and (b), wherein (a) is menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product, and (b) is one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product (page 4, lines 14-25; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit juice-containing food product is a fruit juice-containing beverage (page 5, line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Another embodiment of the present invention, per independent claim 17, is a method for reinforcing a flavor in a fruit juice-containing food product, comprising adding, besides a fruit component and a base having sweetness, components (a) and (b), wherein (a) is menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and (b) is one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product (page 9 lines 2-13; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit juice-containing food product is a fruit juice-containing beverage (page 5,

line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Another embodiment of the present invention, per independent claim 18, is a method for reinforcing a flavor in a fruit juice-containing food product having a base containing sweetness, comprising adding, besides a fruit component, components (a) and (b), wherein (a) is menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product, and (b) is one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product (page 9 line 18 to page 10, line 1; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit juice-containing food product is a fruit juice-containing beverage (page 5, line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Another embodiment of the present invention, per independent claim 19, is a method for reinforcing a flavor in a fruit juice-containing beverage, comprising adding to the fruit juice-containing beverage, besides a fruit component and a base having sweetness, components (a) and (b), wherein (a)

is a menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product, and (b) is one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product (page 10, lines 6-17; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components (page 5, line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Another embodiment of the present invention, per independent claim 20, is a method for reinforcing a flavor in a fruit juice-containing beverage having a base containing sweetness, comprising adding to the fruit juice-containing beverage, besides a fruit component, components (a) and (b), wherein (a) is menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product, and (b) is one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product (page 10, line 22 to page 11, line 5; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components (page 5, line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons,

Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Another embodiment of the present invention, per independent claim 23, is a method for reinforcing a flavor in a fruit juice-containing dairy product, comprising adding, besides a fruit component and a base having sweetness, components (a) and (b), wherein (a) is menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product, and (b) is one or more cool feeling substances selected from the group consisting of 3-1-menthoxypropane-1,2-diol, 3-1-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product (page 12, lines 15-26; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit juice-containing dairy product is a fruit juice-containing beverage (page 5, line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Another embodiment of the present invention, per independent claim 24, is a method for reinforcing a flavor in a fruit juice-containing dairy product having a base containing sweetness, comprising adding, besides a fruit component, components (a) and (b), wherein (a) is menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product, and (b) is one or more cool feeling substances selected from the group consisting of 3-1-menthoxypropane-1,2-diol, 3-1-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing

food product (page 13, lines 2-14; and page 39, Table 2 of the Clean Copy of the Substitute Specification). The fruit juice-containing dairy product is a fruit juice-containing beverage (page 5, line 29 to page 6, line 2 of the Clean Copy of the Substitute Specification). The fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos (page 5, lines 2-5; and page 5, lines 25-29 of the Clean Copy of the Substitute Specification).

Argument

Claims 1, 3, 5, 8, 13, 14, 17-20, and 25-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al. (US 6,579,010 (Ishida et al. '010) in view of Ishida et al. (WO 2003/074622 using US 2005/0129721 (Ishida et al. '721) as a translation).

Claims 1, 3, 5, 8, 13, and 14

The Examiner's Position:

The Examiner found that Ishida et al. '010 teach a carbonated beverage comprising lemon juice concentrate, liquid sugar (dextrose) base, flavor improving vanillyl-n-butyl ether (col. 9:36-49), and cool-feeling and refreshing-feeling substances (col. 4:56-61) including menthol and 3-(1-menthoxy)propane-1,2-diol. Ishida et al. '721 is relied on for teaching that it is known to combine two or more cool feeling substances to enhance the cooling effect (para. [0005]) and relative amounts of the two cool feeling substances (Table 1, Example 1, and paras. [0020] and [0025]).

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), whether taken in combination, or taken alone, do not suggest the claimed fruit juice-containing beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 1.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed composition. As shown in the present specification, fruit juice-containing beverages according to the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially

weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage composition with concentrations within the claimed ranges provide an unexpected combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979)). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol provide relatively good taste immediately

after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing beverages formed from the fruit juices of claim 1. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) and cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) provide unexpected results.

There is no suggestion in the prior art that the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claim 25

The Examiner's Position:

The Examiner found that Ishida et al. '721 teach a range of a range of menthol and cool feeling substances that encompasses the claimed concentration range.

Appellants' Position:

The combination of Ishida et al. '010 and Ishida et al. '721 do not suggest the claimed composition range of menthol and cool feeling substance selected from the group consisting of 3-1-menthoxypropane-1,2-diol, 3-1-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol for at least the same reasons as claim 1, discussed supra. The present claims are further distinguishable because the claimed ranges of menthol in an amount of 0.027 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and the cool feeling substance in an amount of 0.003 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product is substantially narrower than the ranges in claims 1. Furthermore, as shown in Table 3 of the present specification Examples 1-(5) and 1-(6) which fall within the claimed range provide superior light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness compared to the other examples.

Claim 26

The Examiner's Position:

The Examiner found that Ishida et al. '721 disclose the cool feeling substance is 3-1-menthoxypropane-1,2-diol.

Appellants' Position:

The combination of Ishida et al. '010 and Ishida et al. '721 do not suggest the claimed cool feeling substance is 3-l-menthoxypropane-1,2-diol for at least the same reasons as claim 1, discussed supra. As shown in Table 3 of the present specification, the use of 3-l-menthoxypropane-1,2-diol in the claimed amounts provide an unexpected combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness compared to the other examples. Furthermore, it would not have been obvious to select the single claimed cool feeling substance from the plurality of cool feeling substances disclosed in the prior art.

Claim 27

The Examiner's Position:

The Examiner found that Ishida et al. '010 disclose lemon juice.

Appellants' Position:

The combination of Ishida et al. '010 and Ishida et al. '721 do not suggest the claimed the fruit juice-containing beverage is selected from the group consisting of orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice, for at least the same reasons as claim 1. The Examples in the present specification disclose the unexpected improvements provided to fruit juice beverages comprising menthol, cool feeling substance, and fruit juice. Furthermore, the Examiner acknowledged that the evidentiary support in the examples for orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. In addition, it would not have been obvious to select the specifically claimed juices from the large number of different compositions disclosed by Ishida '010 (see cols. 3-4).

Claim 28

The Examiner's Position:

The Examiner found that Ishida et al. '010 disclose lemon juice, and Ishida et al. '721 disclose 3-l-menthoxypropane-1,2-diol.

Appellants' Position:

The combination of Ishida et al. '010 and Ishida et al. '721 do not suggest the claimed the fruit juice-containing beverage is selected from the group consisting of orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice, and the cool feeling substance is 3-l-menthoxypropane-1,2-diol for at least the same reasons as claim 1, discussed supra. For example, as shown in Table 3 of the present specification, the use of 3-l-menthoxypropane-1,2-diol in the claimed amounts in a beverage containing orange juice provides an unexpected combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness compared to the other examples. Furthermore, the Examiner acknowledged the evidentiary support in the examples for orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. In addition, it would not have been obvious to select the single claimed cool feeling substance and the limited number of fruit juices from the plurality of cool feeling substances disclosed in the prior art.

Claim 17

The Examiner's Position:

The Examiner found that Ishida et al. '010 teach a carbonated beverage comprising lemon juice concentrate, liquid sugar (dextrose) base, flavor improving vanillyl-n-butyl ether (col. 9:36-49), and cool-feeling and refreshing-feeling substances (col. 4:56-61) including menthol and 3-(1-

menthoxy)propane-1,2-diol. Ishida et al. '721 is relied on for teaching that it is known to combine two or more cool feeling substances to enhance the cooling effect (para. [0005]) and relative amounts of the two cool feeling substances (Table 1, Example 1, and paras. [0020] and [0025]).

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), whether taken in combination, or taken alone, do not suggest the claimed method for reinforcing a flavor in a fruit juice-containing beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages produced by the claimed method comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 17.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed method. As shown in the present specification, fruit juice-containing beverages provided by the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner

further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage composition with concentrations within the claimed ranges produced by the claimed method provide an unexpected combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a

trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979)). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol provide relatively good taste immediately after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing beverages formed from the fruit juices of claim 17. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) and cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) provide unexpected results.

There is no suggestion in the prior art that methods using the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claim 18**The Examiner's Position:**

The Examiner found that Ishida et al. '010 teach a carbonated beverage comprising lemon juice concentrate, liquid sugar (dextrose) base, flavor improving vanillyl-n-butyl ether (col. 9:36-49), and cool-feeling and refreshing-feeling substances (col. 4:56-61) including menthol and 3-(1-menthoxy)propane-1,2-diol. Ishida et al. '721 is relied on for teaching that it is known to combine two or more cool feeling substances to enhance the cooling effect (para. [0005]) and relative amounts of the two cool feeling substances (Table 1, Example 1, and paras. [0020] and [0025]).

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), whether taken in combination, or taken alone, do not suggest the claimed method for reinforcing a flavor in a fruit juice-containing beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages produced by the claimed method comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 18.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed method. As shown in the present specification, fruit juice-containing beverages provided by the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3,

Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage composition with concentrations within the claimed ranges produced by the claimed method provide an unexpected combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth,"

"continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979)). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol provide relatively good taste immediately after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing beverages formed from the fruit juices of claim 18. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) and cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) provide unexpected results.

There is no suggestion in the prior art that methods using the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit

juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claim 19

The Examiner's Position:

The Examiner found that Ishida et al. '010 teach a carbonated beverage comprising lemon juice concentrate, liquid sugar (dextrose) base, flavor improving vanillyl-n-butyl ether (col. 9:36-49), and cool-feeling and refreshing-feeling substances (col. 4:56-61) including menthol and 3-(1-menthoxy)propane-1,2-diol. Ishida et al. '721 is relied on for teaching that it is known to combine two or more cool feeling substances to enhance the cooling effect (para. [0005]) and relative amounts of the two cool feeling substances (Table 1, Example 1, and paras. [0020] and [0025]).

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), whether taken in combination, or taken alone, do not suggest the claimed method for reinforcing a flavor in a fruit juice-containing beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages produced by the claimed method comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice

is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 19.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed method. As shown in the present specification, fruit juice-containing beverages provided by the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage composition with concentrations within the claimed ranges produced by the claimed method provide an unexpected

combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol provide relatively good taste immediately after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing beverages formed from the fruit juices of claim 19. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification

that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) and cool feeling substances selected from the group consisting of 3-1-menthoxypropane-1,2-diol, 3-1-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) provide unexpected results.

There is no suggestion in the prior art that methods using the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claim 20

The Examiner's Position:

The Examiner found that Ishida et al. '010 teach a carbonated beverage comprising lemon juice concentrate, liquid sugar (dextrose) base, flavor improving vanillyl-n-butyl ether (col. 9:36-49), and cool-feeling and refreshing-feeling substances (col. 4:56-61) including menthol and 3-(1-menthoxy)propane-1,2-diol. Ishida et al. '721 is relied on for teaching that it is known to combine two or more cool feeling substances to enhance the cooling effect (para. [0005]) and relative amounts of the two cool feeling substances (Table 1, Example 1, and paras. [0020] and [0025]).

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), whether taken in combination, or taken alone, do not suggest the claimed method for reinforcing a flavor in a fruit juice-containing beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages produced by the claimed method comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 20.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed method. As shown in the present specification, fruit juice-containing beverages provided by the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially

weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage composition with concentrations within the claimed ranges produced by the claimed method provide an unexpected combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979)). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol provide relatively good taste immediately

after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing beverages formed from the fruit juices of claim 20. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) and cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) provide unexpected results.

There is no suggestion in the prior art that methods using the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claims 11, 12, 16, 23, and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al. '010 in view of Ishida et al. '721 and further in view of Kaplan (US 2002/0182296).

Claims 11, 12, and 16

The Examiner's Position:

The Examiner acknowledged that Ishida et al. '010 and Ishida et al. '721 do not disclose a fruit juice containing a dairy product. The Examiner relied on Kaplan's teaching of carbonated milk products to conclude it would have been obvious to combine Kaplan with Ishida et al. '010 and '721 to provide a dairy beverage, which is perceived to be a healthy alternative to soft drinks.

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), and Kaplan, whether taken in combination, or taken alone, do not suggest the claimed fruit juice-containing dairy beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claims 11, 12, and 16.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed composition. As shown in the present specification, fruit juice-containing beverages according to the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light

feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage composition with concentrations within the claimed ranges provide an unexpected combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the

relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979)). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol provide relatively good taste immediately after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing beverages formed from the fruit juices of claim 1. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) and cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product) provide unexpected results.

There is no suggestion in the prior art that the narrow claimed composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claim 23

The Examiner's Position:

The Examiner acknowledged that Ishida et al. '010 and Ishida et al. '721 do not disclose a fruit juice containing a dairy product. The Examiner relied on Kaplan's teaching of carbonated milk products to conclude it would have been obvious to combine Kaplan with Ishida et al. '010 and '721 to provide a dairy beverage, which is perceived to be a healthy alternative to soft drinks.

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), and Kaplan, whether taken in combination, or taken alone, do not suggest the claimed method for reinforcing a flavor in a fruit juice-containing beverage because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages produced by the claimed method comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the

concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 23.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed methods. As shown in the present specification, fruit juice-containing beverage produced according to the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing food product compositions with concentrations within the claimed ranges produced by the claimed method provide an unexpected

combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol provide relatively good taste immediately after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing dairy product formed from the fruit juices of claim 23. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification

that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) and cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) provide unexpected results.

There is no suggestion in the prior art that methods using the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Claim 24

The Examiner's Position:

The Examiner acknowledged that Ishida et al. '010 and Ishida et al. '721 do not disclose a fruit juice containing a dairy product. The Examiner relied on Kaplan's teaching of carbonated milk products to conclude it would have been obvious to combine Kaplan with Ishida et al. '010 and '721 to provide a dairy beverage, which is perceived to be a healthy alternative to soft drinks.

Appellants' Position:

Ishida et al. ('010) and Ishida et al. ('721), and Kaplan, whether taken in combination, or taken alone, do not suggest the claimed method for reinforcing a flavor in a fruit juice-containing dairy product because the cited references do not suggest the unexpected results obtained by fruit juice-containing beverages produced by the claimed method comprising the specific mixtures of menthol and the specifically claimed one or more cool feeling substances, wherein straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos, as required by claim 24.

The cited references do not suggest the unexpected improvements in the fruit juice-containing beverages obtained by the claimed methods. As shown in the present specification, fruit juice-containing beverage produced according to the present invention having the specifically claimed concentration range of menthol and cool feeling substances provide an unexpectedly improved combination of light feeling in the mouth, continuation of light feeling, and heavy feeling of sweetness (see Table 3, Examples 1-(4) to 1-(6)), as compared to other fruit juice-containing beverages containing menthol and cool feeling substances outside the claimed ranges.

In the Response to Arguments section, the Examiner asserted that the claims are not commensurate in scope with the evidence of unexpected results. The Examiner noted that the evidence of unexpected results do not occur over the entire range of fruit-containing food, but was limited to orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice. The Examiner further noted that Examples 1-(4) to 1-(6) used only 3-1-menthoxy-1,2-diol as the cool feeling substance. The Examiner further suggested that not enough examples were tested. Furthermore, the Examiner found the Specification does not indicate any reference to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially

weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste," and that these terms lack definition, and repeatable objective results.

Contrary to the Examiner's assertions in the Response to Arguments section of the Final Rejection, the claimed combinations of menthol and cool feeling substances provide unexpected results. As the data in Tables 2 and 3 demonstrate, fruit juice-containing beverage compositions with concentrations within the claimed ranges produced by the claimed method provide an unexpected combination of especially strong light feeling in the mouth, strongly continuous light feeling, and light aftertaste without heavy taste of heavy feeling of sweetness. In addition, as shown in the data in Tables 5-1 and 5-2, the claimed combinations of menthol and cooling substances provides especially strong light feeling in the mouth and provide relatively good feeling in taste, both immediately after preparation and after storage at 60 °C for 20 days. These test results are based on the combined evaluations of 10 individuals (5 men and 5 women) used in the sensory evaluations. Thus, one of ordinary skill in this art is able to qualify the relative comparisons of "light feeling in the mouth," "continuation of light feeling," "heavy feeling of sweetness," "especially weak," "slightly positive," "strong," "especially strong," "bad taste," "normal," "slightly good taste," and "relatively good taste."

The Examiner noted that in accordance with the holding in *In re Clemens*, 622 F.2d 1029 (CCPA 1980), objective evidence of unexpected results must be commensurate in scope with the claims. *Clemens*, however, recognizes that a narrow range of data can be reasonably extended to prove the unobviousness of a broader claim range, when one having ordinary skill in the art could ascertain a trend in the exemplified data. *Clemens*, 622 F.3d at 1036 (citing *In re Kollman*, 595 F.2d 48, 56 (CCPA 1979)). Therefore, there is clearly sufficient support for the all the claimed cool feeling substances. Tables 5-1 and 5-2 demonstrate that each of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol provide relatively good taste immediately

after preparation and after storage at a composition amount within the claimed range, in contrast to other cool feeling substances.

In addition, the exemplification of six different types of fruit juices evidences a trend that the claimed composition would also provide a like improvement in the fruit juice-containing dairy product formed from the fruit juices of claim 24. There is no teaching that the present invention would not be applicable to other types of fruit juices. There is ample data in the tables of the present specification that the claimed amounts of menthol (0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) and cool feeling substances selected from the group consisting of 3-1-menthoxypropane-1,2-diol, 3-1-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol (0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing beverage) provide unexpected results.

There is no suggestion in the prior art that methods using the claimed narrow composition range of menthol and cool feeling substances would provide the unexpected improvement in a fruit juice-containing beverage. As shown in Table 3, the claimed amounts of menthol and cool feeling substances provide especially strong light feeling in the mouth, strongly or very strongly continuous light feeling, and relatively heavy taste or light aftertaste without heavy taste of sweetness. The examples outside of the claimed amounts of menthol and cool feeling substances have one or more negative attributes, such as especially weak, only slightly positive, or bitter light feeling in the mouth; not continuous or weakly continuous light feeling; and/or especially heavy taste and aftertaste.

Conclusion

Based upon the arguments submitted supra, Appellants respectfully submit that the Examiner's rejections under 35 U.S.C. § 103 are not legally viable. Appellants, therefore, respectfully solicit the Honorable Board to reverse the Examiner's rejections of claims 1, 3, 5, 8, 13, 14, 17-20, and 25-28 as

being obvious in view of Ishida et al. '010 and Ishida et al. '721; and claims 11, 12, 16, 23, and 24 as being obvious in view of Ishida et al. '010, Ishida et al. '721, and Kaplan. For all of the foregoing reasons, Appellants respectfully submit that the grounds of rejection of the claims on appeal constitute harmful and reversible error and should be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

1. A fruit juice-containing food product comprising, in addition to a fruit component and a base having sweetness, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit juice-containing food product is a fruit juice-containing beverage,

the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

3. A fruit juice-containing food product according to claim 1, wherein the base having sweetness comprises one or more kinds selected from the group consisting of sorbitol, glycerin, propylene glycol, saccharin sodium salt, aspartame, xylose, maltose, glucose, sucrose, maltitol, maltooligosaccharide, erythritol, xylitol, sucralose, acesulfame K, glycyrrhizin, glycyrrhizin dipotassium, stevia, fructooligo-saccharide, honey, and a licorice extract.

5. A fruit juice-containing food product according to claim 1 or 3, wherein, in the mass ratio of a refreshing feeling substance to a cool feeling substance, the cool feeling substance is from 0.01 to 100 parts by mass based on 1 part by mass of the refreshing feeling substance.

8. A fruit juice-containing food product according to claim 1, wherein the fruit juice-containing beverage is a fruit beverage, and the fruit beverage is a fruit juice beverage, a carbonated beverage, soft drinks, sports drinks, near water, an alcohol beverage, health and nutrient drinks, dietary supplements, a fruit wine, or stimulant and energy beverages including coffee, tea, and cocoa.

11. A fruit juice-containing food product according to claim 1 or 3, wherein the fruit juice-containing food product is a fruit juice-containing dairy product.

12. A fruit juice-containing food product according to claim 11, wherein the fruit juice-containing dairy product is a fruit dairy product, and the fruit dairy product is a milk product, a dairy drink, or a yogurt, a sherbet or an ice cream.

13. A fruit juice-containing food product according to claim 1 or 3, wherein the fruit juice-containing food product comprises one or more additional flavor improving substances selected from the group consisting of a vanillyl alkyl ether derivative (alkyl group having 1 to 6 carbons), 4-(1-menthoxy-methyl)-2-(3',4'-dihydroxyphenyl)-1,3-dioxolane, 4-(1-menthoxy-methyl)-2-(3'-methoxy-4'-hydroxyphenyl)-1,3-dioxolane, 4-(1-menthoxy-methyl)-2-(3'-ethoxy-4'-hydroxyphenyl)-1,3-dioxolane, an alkanoic acid vanillamide (alkyl group having 7 to 12 carbons), a vanillin or ethyl vanillin alkylene glycol acetal (alkylene group having 3 to 6 carbons), ginger oleoresin, capsicum

oleoresin, pepper oleoresin, zingerone, piperdine, dihydrocapsaicin, capsaicin, jambu oleoresin, spilanthol, sanshool, sanshoamide, *piper nigrum*, *zanthoxylum peperitum*, chavicine, piperine, and a morphologically processed form thereof.

14. A fruit juice containing food product according to claim 1, wherein the fruit juice-containing beverage comprises one or more additional flavor improving substances selected from the group consisting of a vanillyl alkyl ether derivative (alkyl group having 1 to 6 carbons), 4-(1-menthoxy-methyl)-2-(3',4'-dihydroxyphenyl)-1,3-dioxolane, 4-(1-menthoxy-methyl)-2-(3'-methoxy-4'-hydroxyphenyl)-1,3-dioxolane, 4-(1-menthoxy-methyl)-2-(3'-ethoxy-4-hydroxyphenyl)-1,3-dioxolane, an alkanoic acid vanillamide (alkyl group having 7 to 12 carbons), a vanillin or ethyl vanillin alkylene glycol acetal (alkylene group having 3 to 6 carbons), ginger oleoresin, capsicum oleoresin, pepper oleoresin, zingerone, piperdine, dihydrocapsaicin, capsaicin, jambu oleoresin, spilanthol, sanshool, sanshoamide, *piper nigrum*, *zanthoxylum peperitum*, chavicine, piperine, and/or a morphologically processed form thereof.

16. A fruit juice-containing food product according to claim 11, wherein the fruit juice-containing dairy product comprises one or more additional flavor enhancing (improving) substances selected from the group consisting of a vanillyl alkyl ether derivative (alkyl group having 1 to 6 carbons), 4-(1-menthoxy-methyl)-2-(3',4'-dihydroxyphenyl)-1,3-dioxolane, 4-(1-menthoxy-methyl)-2-(3'-methoxy-4'-hydroxyphenyl)-1,3-dioxolane, 4-(1-menthoxy-methyl)-2-(3'-ethoxy-4'-hydroxyphenyl)-1,3-dioxolane, an alkanoic acid vanillamide (alkyl group having 7 to 12 carbons), a vanillin or ethyl vanillin alkylene glycol acetal (alkylene group having 3 to 6 carbons), ginger oleoresin, capsicum oleoresin, pepper oleoresin, zingerone, piperdine, dihydrocapsaicin, capsaicin,

jambu oleoresin, spilanthol, sanshool, sanshoamide, *piper nigrum*, *zanthoxylum peperitum*, chavicine, piperine, and a morphologically processed form thereof.

17. A method for reinforcing a flavor in a fruit juice-containing food product, comprising adding, besides a fruit component and a base having sweetness, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit juice-containing food product is a fruit juice-containing beverage,

the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

18. A method for reinforcing a flavor in a fruit juice-containing food product having a base containing sweetness, comprising adding, besides a fruit component, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in

an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit juice-containing food product is a fruit juice-containing beverage,

the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

19. A method for reinforcing a flavor in a fruit juice-containing beverage, comprising adding to the fruit juice-containing beverage, besides a fruit component and a base having sweetness, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-l-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

20. A method for reinforcing a flavor in a fruit juice-containing beverage having a base containing sweetness, comprising adding to the fruit juice-containing beverage, besides a fruit component, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

23. A method for reinforcing a flavor in a fruit juice-containing dairy product, comprising adding, besides a fruit component and a base having sweetness, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit juice-containing dairy product is a fruit juice-containing beverage,

the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

24. A method for reinforcing a flavor in a fruit juice-containing dairy product having a base containing sweetness, comprising adding, besides a fruit component, components (a) and (b):

(a) menthol in an amount of 0.009 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and

(b) one or more cool feeling substances selected from the group consisting of 3-l-menthoxypropane-1,2-diol, 3-l-menthoxy-2-methylpropane-1,2-diol, and 2-1-menthoxyethane-1-ol in an amount of 0.001 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product,

wherein the fruit juice-containing dairy product is a fruit juice-containing beverage,

the fruit component is a straight fruit juice or a concentrated fruit juice or blends of two or more fruit juice components, and

the straight fruit juice or the concentrated fruit juice is a juice of citrus fruits, apples, peaches, grapes, blueberries, raspberries, strawberries, melons, Japanese apricots, cassis, and marumelos.

25. The fruit juice-containing food product according to claim 1, comprising the menthol in an amount of 0.027 to 0.045 parts by mass based on 1000 parts by mass of the fruit juice-containing food product; and the cool feeling substance in an amount of 0.003 to 0.005 parts by mass based on 1000 parts by mass of the fruit juice-containing food product.

26. The fruit juice-containing food product according to claim 1, wherein the cool feeling substance is 3-1-menthoxypropane-1,2-diol.

27. The fruit juice-containing food product according to claim 1, wherein the fruit juice-containing beverage is selected from the group consisting of orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice.

28. The fruit juice-containing food product according to claim 25, wherein the cool feeling substance is 3-1-menthoxypropane-1,2-diol; and

the fruit juice-containing beverage is selected from the group consisting of orange juice, lemon juice, apple juice, peach juice, grapefruit juice, and grape juice.